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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/797,383	03/10/2004	Chris H. Jenson	2507	3241
7590	03/10/2006			
BRUZGA & ASSOCIATES 11 BROADWAY SUITE 715 NEW YORK, NY 10004			EXAMINER RUDE, TIMOTHY L	
			ART UNIT 2883	PAPER NUMBER

DATE MAILED: 03/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/797,383

Applicant(s)

JENSON ET AL.

Examiner

Timothy L. Rude

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2883

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) 7,8,14,15,21,22 and 30-39 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6,9,10,16-20 and 23-26 is/are rejected.
- 7) ☒ Claim(s) 11-13 and 27-29 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 20040607, 20050222, 2005/02/.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election without traverse of species A, sub-species A2, and sub-species A3 in the reply filed on 15 December 2005 is acknowledged.

Claims 7, 8, 14, 15, 21, 22, and 30-39 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected sub-species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 15 December 2005.

Please note claims 7, 8, 21, and 22 have limitations drawn to non-elected sub-species A4. Claims 14, 15, and 30 have limitations drawn to non-elected sub-species A-1.

Examiner thanks Applicant for pointing out that Figure 2 is associated with embodiment 1, species A, as opposed to embodiment 2, species B.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Imamura et al (Imamura) USPAT 6,563,993 B1.

As to claims 1-5, Imamura discloses a light pipe [col. 6, lines 33-63] with side-light extraction by light pipe-surface alteration, comprising:

- a) an optical light pipe with a plastic light-carrying portion covered with a fluoropolymer cladding; and
- b) a plurality of light-extraction devices, 1 [col. 5, lines 43-61, especially lines 56-61], spaced along an active section of the light pipe for emission of side light over a range from 1 % to 99 % of the cross-sectional circumference of the light pipe in the active region, constituting a plurality of optical elements spaced along the length of the light pipe and having inlets passing through the cladding and optically contacting the light-carrying portion;

c) the light-extraction devices having inlets passing through the cladding and optically contacting the plastic light-carrying portion [Figure 1], wherein the light-carrying portion comprises acrylic polymer [col. 4, lines 34-56].

Applicant's Figure 5a:

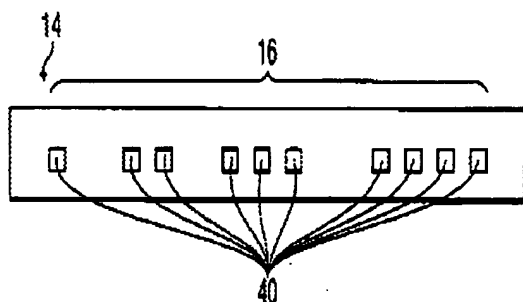


FIG. 5a

Imamura Figure 1:

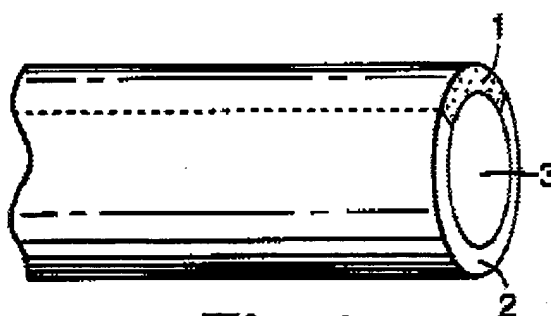


Fig. 1

Imamura does not explicitly disclose light-extraction devices spaced along an active section of the light pipe for emission of side light over only a range from about 2 to 270 degrees of the cross-sectional circumference of the light pipe.

Imamura teaches that one can make the light-extraction devices spaced along an active section of the light pipe for emission of side light over any range along the curvature from 1 % to 99 % [3.65 to 361.35 degrees] of the cross-sectional circumference of the light pipe to satisfy the needs of a particular field of use [col. 5, lines 43-61], i.e., make the light come out wherever you want it.

Imamura is evidence that workers of ordinary skill in the art would find the reason, suggestion, or motivation to add light-extraction devices spaced along an active

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section of the light pipe for emission of side light over any range along the curvature from 2 to 270 degrees or from 30 to 90 degrees of the cross-sectional circumference of the light pipe to satisfy the needs of a particular field of use and make the light come out wherever you want it.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Imamura with the light-extraction devices spaced along an active section of the light pipe for emission of side light over any range along the curvature from 2 to 270 degrees, less than 180 degrees, 30 to 90 degrees, no more than about 45 degrees, or no more than about 30 degrees, of the cross-sectional circumference of the light pipe to satisfy the needs of a particular field of use and make the light come out wherever you want it.

As to claims 9 and 10, Imamura discloses the light pipe of claim 1 above wherein the light-carrying portion comprises acrylic polymer wherein light-extraction devices comprise respective pieces of material passing through the cladding and optically contacting the plastic light-carrying portion.

Imamura does not explicitly disclose wherein said pieces of material have a refractive index at least as high as that of the light-carrying portion.

Imamura teaches light-extraction devices comprise respective pieces of material made of the same material as the cladding [low refractive index] with light scattering particles inside [col. 5, lines 1-6] that would be well known in the art to be much higher refractive index in order to provide good light scattering performance.

Imamura is evidence that workers of ordinary skill in the art would find the reason, suggestion, or motivation to add pieces with a much higher refractive index in order to provide good light scattering performance.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Imamura with the pieces of much higher refractive index in order to provide good light scattering performance.

As to claims 6, 16-19 and 23-25, Imamura discloses a light pipe with side-light extraction by light pipe-surface alteration above, comprising:

a) an optical light pipe with an acrylic polymer light-carrying portion covered with a fluoropolymer cladding [col. 4, lines 57-65].

Imamura does not explicitly disclose d) the light-extraction devices being spaced along the length of the light pipe with a density that increases sequentially along the length of the light pipe the further the distance along the light pipe from a light source.

Imamura teaches one can position light-extraction devices [col. 5, lines 43-61] wherever one wants light to be.

Imamura is evidence that workers of ordinary skill in the art would find the reason, suggestion, or motivation to add light-extraction devices with a density that increases sequentially along the length of the light pipe the further the distance along the light pipe from a light source when that is where one wants light to be.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Imamura with light-extraction devices with a density that increases sequentially along the length of the light pipe the further the distance along the light pipe from a light source of Imamura when that is where one wants light to be.

As to claims 20 and 26, Imamura discloses the light pipe of claims 17 and 23 above, respectively.

Imamura does not explicitly disclose a light pipe wherein the diameter of the light-carrying portion is between about 6 mm and 25 mm.

Imamura teaches that his invention is to address uses such as an alternate to a neon bulbs for advertisement [col. 1, lines 15-20], wherein the size is well known to be in the claimed range of 6 mm and 25 mm.

Imamura is evidence that workers of ordinary skill in the art would find the reason, suggestion, or motivation to use a light pipe wherein the diameter of the light-carrying portion is between about 6 mm and 25 mm to provide for satisfactory use as an advertisement light.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Imamura with a light pipe wherein the diameter of the light-carrying portion is between about 6 mm and 25 mm of Imamura to provide for satisfactory use as an advertisement light.



***Allowable Subject Matter***

Claims 11-13 and 27-29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

As to claims 11 and 27, relevant prior art of record did not disclose nor render obvious, alone or in combination, a light pipe as claimed comprising: said pieces that have a substantially flat, rectangular surface facing radially away from the light pipe.

The closest combination is cited above.

No prior art was found with motivation to combine to comprise the claimed pieces that have a substantially flat, rectangular surface facing radially away from the light pipe.

As to claims 12-13 and 28-29, they directly or indirectly depend from a claim with allowable subject matter above.

References cited but not applied are relevant to the instant Application.

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy L. Rude whose telephone number is (571) 272-2301. The examiner can normally be reached on Mon-Thurs.

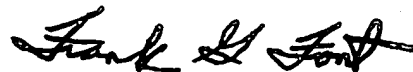
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on (571) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



tlr

Timothy L Rude  
Examiner  
Art Unit 2883



Frank G. Font  
Supervisory Patent Examiner  
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